

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ALTERWAN, INC.)	
)	
Plaintiff,)	
)	
v.)	C.A. No. 19-1544 (MN)
)	
AMAZON.COM, INC., and AMAZON)	
WEB SERVICES, INC.)	
)	
Defendants.)	

MEMORANDUM ORDER

At Wilmington, on this 31st day of October 2024.

The dispute presently before the Court is the construction of the term “non-blocking bandwidth,” which itself does not appear in the claims of the asserted patent. The disputed term, “non-blocking bandwidth,” is part of the Court’s construction of the term “cooperating service provider,” which does appear in the claims. Although the Court does not ordinarily construe words not within a patent’s claims, the parties’ dispute about the correct construction of “cooperating service provider,” necessitates construction of “non-blocking bandwidth,” as well.

For the reasons stated below, the disputed, non-claim term “non-blocking bandwidth” shall be construed to mean “bandwidth that will always be available and will always be sufficient while the network is able to transmit data.”

I. BACKGROUND

AlterWAN, Inc. (“AlterWAN” or “Plaintiff”) owns U.S. Patent No. 8,595,478 (“the ’478 patent”). AlterWAN alleges that Amazon.com, Inc. and Amazon Web Services, Inc. (together, “Amazon” or “Defendants”) infringe claims 18 and 51 (“the asserted claims”) of the ’478 patent.

In a March 2021 Memorandum Order, the Court construed “non-blocking bandwidth” to mean “bandwidth that will always be available and will always be sufficient.” (D.I. 133 at 7). The Court reasoned its construction was appropriate because the ’478 patent’s Summary of Invention defined “non-blocking bandwidth” as “bandwidth that will always be available and will always be sufficient.” (’478 patent, 4:66-5:1). The Court denied AlterWAN’s request to add the phrase “when the network is operational” to its construction because it observed that the “specification never discusses the issue of *force majeure* or the possibility that the network will not be operational.” (D.I. 133 at 8).

On November 23, 2021, during a summary judgment hearing, the Court revised a previous construction and construed “cooperating service provider” to mean “a service provider that agrees to provide non-blocking bandwidth.” (D.I. 313 at 44:15-16). Following the revised construction of “cooperating service provider,” AlterWAN and Amazon filed a Stipulation and Order of Non-Infringement of the Patents-in-Suit.¹ (D.I. 315). The Court then entered a final judgment based on the stipulation. (D.I. 317). AlterWAN then appealed the judgment to the Federal Circuit. In its appeal, AlterWAN argued that the Court erred by failing to add the qualifier “while the network is operational” to its construction of “non-blocking bandwidth.” *AlterWAN, Inc. v. Amazon.com, Inc.*, 63 F.4th 18, 23 (Fed. Cir. 2023). The Federal Circuit, however, declined to construe “non-blocking bandwidth.” Instead, the Federal Circuit vacated the stipulated judgment of non-infringement and remanded the case to this Court for further proceedings. Nevertheless, in dicta, the Federal Circuit made the following observations about the term “non-blocking bandwidth:”

The specification does not remotely suggest operability when the Internet is unavailable. Claims that are directed to transmission over

¹ Prior to and during the appeal to the Federal Circuit, Plaintiff also alleged that Defendants infringed U.S. Patent No. 9,015,471 (“the ’471 patent”). After the Federal Circuit’s judgment, Plaintiff dropped its claims related to the ’471 patent.

the Internet cannot require such transmission when the Internet is not working. In light of the specification, “non-blocking bandwidth” is properly understood to address the problem of latency, rather than providing for bandwidth even in the scenario where the Internet is inoperable. We do not opine on what the meaning of non-blocking bandwidth is, other than it does not require bandwidth when the Internet is down.

63 F.4th at 24.

Accordingly, “[l]ike some ghoul in a late-night horror movie that repeatedly sits up in its grave and shuffles abroad, after being repeatedly killed and buried,” the term “non-blocking bandwidth” – and “cooperating service provider” by implication—appears before the Court for construction again. *Lamb’s Chapel v. Ctr. Moriches Union Free Sch. Dist.*, 508 U.S. 384, 398 (1993) (Scalia, J., concurring in the judgment).

In the latest round of claim construction, AlterWAN argues “non-blocking bandwidth” means “bandwidth that will always be available and will always be sufficient *while the network is operational.*” (D.I. 331 at 6) (emphasis added). In contrast, Amazon argues “non-blocking bandwidth” means “bandwidth that will always be available and will always be sufficient *while the network is able to transmit data.*”²

The Court heard argument about the disputed non-claim term “non-blocking bandwidth” on July 25, 2024, and September 20, 2024. (D.I. 370; D.I. 381). The parties briefed the issue

² Prior to the September 20, 2024 continued Markman Hearing, Amazon proposed the construction should be “bandwidth that will always be available and will always be sufficient when the Internet is operable.” (D.I. 331 at 6). At the September 20, 2024 continued Markman Hearing, Amazon, however, changed its proposed construction to “bandwidth that will always be available and will always be sufficient while the network is able to transmit data.” Neither the Court nor Plaintiff were made aware, before the hearing, that Amazon was changing its construction argument. The Court offered Plaintiff an opportunity to defer the claim construction hearing and submit further briefing to address Amazon’s new construction. (D.I. 381 at 43:11-23, 44:6-12, 65:16-20). Plaintiff graciously declined. (*Id.* at 65:24-66:1).

(D.I. 331) and submitted intrinsic and extrinsic evidence, including declarations from experts (D.I. 332; D.I. 371; D.I. 379). The Court carefully reviewed all the submissions and heard oral argument and testimony from both parties' experts. For the reasons explained below, the Court adopts Amazon's construction and construes "non-blocking bandwidth" to mean "bandwidth that will always be available and will always be sufficient while the network is able to transmit data."

II. LEGAL STANDARD

"[T]he ultimate question of the proper construction of the patent [is] a question of law," although subsidiary fact-finding is sometimes necessary. *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 325 (2015). Although the Court does "not ordinarily construe words that are not in claims," where "the correct construction of a claim term necessitates a derivative construction of a non-claim term, a court may perform the derivative construction in order to elucidate the claim's meaning." *Advanced Fiber Techs. Trust v. J&L Fiber Servs.*, 674 F.3d 1365, 1373 (Fed. Cir. 2012) (internal citation and quotation marks omitted). In these so-called "derivative construction" cases, the Federal Circuit has instructed lower courts to examine its decision in *Edwards Lifesciences LLC v. Cook Inc.*, 582 F.3d 1322 (Fed. Cir. 2009), and to follow the "guiding principles" set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005). *Advanced Fiber Techs. Trust*, 674 F.3d at 1374.

In accordance with those principles, "the words of a claim are generally given their ordinary and customary meaning [which is] the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Phillips*, 415 F.3d at 1312-13 (Fed. Cir. 2005) (en banc) (internal citations and quotation marks omitted). Although "the claims themselves provide substantial guidance as to the meaning of particular claim terms," the context of the surrounding words of the claim must also be considered. *Id.* at 1314. "[T]he ordinary meaning of a claim term is its meaning

to the ordinary artisan after reading the entire patent.” *Id.* at 1321 (internal quotation marks omitted).

The patent specification “is always highly relevant to the claim construction analysis . . . [as] it is the single best guide to the meaning of a disputed term.” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). It is also possible that “the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor’s lexicography governs.” *Phillips*, 415 F.3d at 1316. “Even when the specification describes only a single embodiment, [however,] the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction.” *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1372 (Fed. Cir. 2014) (internal quotation marks omitted) (quoting *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004)).

In addition to the specification, a court “should also consider the patent’s prosecution history, if it is in evidence.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996). The prosecution history, which is “intrinsic evidence, . . . consists of the complete record of the proceedings before the PTO [Patent and Trademark Office] and includes the prior art cited during the examination of the patent.” *Phillips*, 415 F.3d at 1317. “[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Id.*

In some cases, courts “will need to look beyond the patent’s intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the

meaning of a term in the relevant art during the relevant time period.” *Teva*, 574 U.S. at 331. Extrinsic evidence “consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” *Markman*, 52 F.3d at 980. Expert testimony can be useful “to ensure that the court’s understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field.” *Phillips*, 415 F.3d at 1318. Nonetheless, courts must not lose sight of the fact that “expert reports and testimony [are] generated at the time of and for the purpose of litigation and thus can suffer from bias that is not present in intrinsic evidence.” *Id.* Overall, although extrinsic evidence “may be useful to the court,” it is “less reliable” than intrinsic evidence, and its consideration “is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” *Id.* at 1318-19. Nevertheless, where the “meaning of the disputed terms is not readily apparent from the patent itself” or the patent’s prosecution history paints an incomplete picture, extrinsic evidence, like expert testimony, can be “particularly helpful.” *Adv. Cardiovascular Sys. v. Scimed Life Sys.*, 887 F.2d 1070, 1073 (Fed. Cir. 1989).

III. ANALYSIS

A. Plaintiff’s Position

AlterWAN proposes the Court construe “non-blocking bandwidth” to mean “bandwidth that will always be available and will always be sufficient *while the network is operational*.” (D.I. 331 at 6) (emphasis added). Plaintiff’s expert, Dr. Guérin, opined that a person of skill in the art would understand the “while network is operational” to mean that “all the equipment in the network that the customer traffic is traversing is up and running” so that the customer receives all the bandwidth for which they paid and expected to receive. (D.I. 381 at 9:3-7; 9:10-10:2 (Dr. Guérin explaining his understanding of the term “operational”)). Illustratively, Dr. Guérin

explained that where a customer expects to receive 100 megabits of bandwidth and receives 100 megabits of bandwidth, then the network is considered operational. (*See id.*). Further, the network would still be considered operational where a redundant line or connection was *not* working, so long as the customer received the 100 megabits of bandwidth. (*See id.* at 12:6-8 (Dr. Guérin stating, “[i]f you can provide the 100 and the piece that goes down has no impact on providing the 100, then yes, the network is operational.”)). AlterWAN argues that its construction is logical because it accounts for the fact that large networks frequently experience local failures, but rarely experience global outages. (*Id.* at 15:7-14). Therefore, so long as the customer receives exactly, and no less than, its individualized, expected bandwidth, then the network is operational and the cooperating service provider must provide the non-blocking bandwidth.

B. Defendants’ Position

In contrast, Defendants argue “non-blocking bandwidth” should be construed as “bandwidth that will always be available and will always be sufficient while the network is able to transmit data.” Defendants’ expert, Dr. Jeffay,³ explained that a person of ordinary skill in the art would consider the network “able to transmit data” when the network can transmit data from origin to destination. (D.I. 381 at 49:14-16). A network is “able to transmit data” in almost all circumstances except for “truly catastrophic events, hurricanes, earthquakes, [and] things like that.” (D.I. 381 at 42:23-43:1). Networks are also “able to transmit data” in the face of routine network failures, unless those failures could not be “reasonably engineered around.” (D.I. 381 at 49:20-22). As a result, if a customer expected and paid for 100 megabits of data, but only received 99 megabits of bandwidth, the network would still be considered “able to transmit data” and the cooperating service provider would be required to provide the non-blocking bandwidth.

³ The Court found Dr. Jeffay to be a very credible witness who was able to answer questions forthrightly and explain the concepts underlying his opinions with clarity.

Additionally, if the customer expected and paid for 100 megabits of data and received 0 megabits, but another network user was able to transmit their data through the network, then the network would still be “able to transmit data” and the cooperating service provider would not be “off the hook” for providing non-blocking bandwidth. (D.I. 381 at 49:20-22).

C. The Court Adopts Defendants’ Construction

After carefully reviewing the parties’ submissions, considering their arguments at both hearings, evaluating the experts’ testimony, and analyzing the patent itself, the Court adopts Defendants’ proposed construction and construes “non-blocking bandwidth” as “bandwidth that will always be available and will always be sufficient while the network is able to transmit data.”

“The specification ‘acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication.’” *Phillips*, 415 F.3d at 1321 (quoting *Vitronics*, 90 F.3d at 1582). Here, the specification explicitly defines “non-blocking bandwidth” as “bandwidth that will always be available and will always be sufficient.” (’478 patent, 4:66-5:1). Both parties incorporate this definition into the beginning of their respective claim constructions. As observed by the Federal Circuit, however, the patent cannot “require[] the impossible.” 63 F.4th at 23. Therefore, the Court’s construction must include a reasonable *force majeure* or “carve out” to counteract the definition’s use of the word “always.”

Amazon’s construction correctly incorporates the requirement that non-blocking bandwidth “will always be available and will always be sufficient,” except for in rare circumstances. Under Amazon’s construction, a cooperating service provider would be required to provide non-blocking bandwidth so long as the network was able to transmit a scintilla of data somewhere in the world. (See D.I. 381 at 47-48). Amazon’s construction would excuse a cooperating service provider from providing non-blocking bandwidth in “truly catastrophic

events” like “hurricanes,” “earthquakes,” or other events that network engineers could not anticipate or reasonably engineer around. (D.I. 381 at 42:23-25, 49:20-22).

In contrast, AlterWAN’s proposed construction would excuse a cooperating service provider from providing non-blocking bandwidth during routine, “mundane failures that would happen in the course of operating any sophisticated network.” (D.I. 381 at 40:12-15 (Dr. Jeffay providing his opinion on Plaintiff’s construction)). Indeed, AlterWAN’s expert explained that the network would be considered non-operational whenever the bandwidth level fell below what the customer expected due to equipment or other failures. (*See id.* at 9:23-10:20 (Dr. Guérin explaining that if there is a “router failure or link failure” or any event where “performance tests” indicated the bandwidth fell below what the customer requested, then the network would be non-operational.)). The Court, however, finds that AlterWAN’s construction strays from the requirement that non-blocking bandwidth “will always be available and will always be sufficient.” Networks frequently experience localized outages and issues which cause temporary decreases in bandwidth. (*See id.* at 20:3-8 (Dr. Guérin explaining that redundant connections are utilized in large networks because “everything can break with a certain probability.”)). As a result, under AlterWAN’s construction a cooperating service provider would only be required to provide non-blocking bandwidth that is “sometimes available and sometimes sufficient.” Such a construction is untethered from the specification’s definition of “non-blocking bandwidth” and stretches beyond a reasonable *force majeure* exception.

Additionally, the Court looks to the patent’s purpose to inform its claim construction. *See Kaken Pharm. Co. v. Iancu*, 952 F.3d 1346, 1352 (Fed. Cir. 2020) (“A patent’s statement of the described invention’s purpose informs the proper construction of claim terms . . .”). Here, the express purpose of the ’478 patent is to solve “the quality of service problem that has plagued prior

attempts” to use the internet as a wide area network backbone. (’478 patent, 4:65-66). The quality of service problem included “both errors in transmission as well as latency,” which is the speed at which packets get from source to destination. (*Id.* at 3:20-23). To fix this problem, the patented technology provides “non-blocking bandwidth (bandwidth that will always be available and will always be sufficient) and predefining routes for the ‘private tunnel’ paths between points on the internet between [internet service provider] facilities.” (*Id.* at 4:66-5:3). Non-blocking bandwidth through “[t]his preplanning of the routing path causes traffic from AlterWAN™ customers to be transmitted quickly and without delay from end to end and not experience delays due to lack of bandwidth or excessive hop count.” (*Id.* at 5:10-13). In other words, non-blocking bandwidth ensures that AlterWAN users are never “starved” for resources because they are provided “a piece of resource bandwidth that was carved out for [them].” (D.I. 381 at 13:4-9 (Dr. Guérin describing what the ’478 patent was designed to accomplish)). Phrased differently, the invention guarantees that each customer gets a “slice [of bandwidth] that is [theirs] that others are not going to be able to encroach.” (*Id.* at 26:19-20).

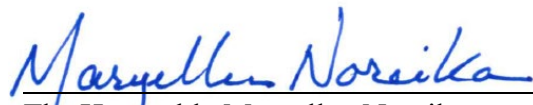
Amazon’s construction properly focuses on the patent’s goal of providing dedicated, reserved bandwidth. Its construction does not require that non-blocking bandwidth meet any sort of customer expectations; instead, the construction only requires that non-blocking bandwidth is always available and always sufficient when the network is capable of transmitting data from source to destination. In this way, it does not require providing non-blocking bandwidth to a customer in the event of a catastrophe.

In contrast, AlterWAN’s construction adds to the notion of reserving bandwidth, the customer’s bandwidth performance expectations. AlterWAN’s construction requires that a cooperating service provider provide non-blocking bandwidth when the equipment is functioning.

(D.I. 138 at 13:18-25 (Dr. Guérin explaining what “operational” means to a person of skill in the art)).⁴ The patent, however, does not require guaranteeing that a customer gets the exact amount of bandwidth it bargained for. Rather, the patent ensures that AlterWAN customers will have a reserved, dedicated line to the internet so they can use the internet as a wide area network backbone. Indeed, a customer may still benefit from *sufficient* bandwidth, enabling them to use the internet as a wide area network backbone, even if that bandwidth is not at the paid-for or greatest level. (See D.I. 381 at 16:5-11 (Dr. Guerin stating that if a customer “most of the time [] only need[s] 90” megabits but paid for 100 megabits, then the network is non-operational); *see also id.* at 26:3-8, 28:14-23 (same)). Accordingly, Amazon’s construction properly focuses on the concept that the bandwidth is reserved, whereas AlterWAN’s construction improperly includes the level of bandwidth the customer anticipated.

IV. CONCLUSION

THEREFORE, for the reasons set forth above, IT IS HEREBY ORDERED that the disputed, non-claim term “non-blocking bandwidth” is construed to mean “bandwidth that will always be available and will always be sufficient while the network is able to transmit data.”


The Honorable Maryellen Noreika
United States District Judge

⁴ The Court is also loath to construe non-claim term “non-blocking bandwidth” to include another disputed non-claim term “operational” and travel further down this rabbit hole in which it finds itself.